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50. The I/O and communications device of claim 49, wherein said first communications connection includes a first signaling standard and said second communications connection includes a second signaling standard.

51. The I/O and communications device of claim 50, wherein said first signaling standard comprises RS-485 and said second signaling standard comprises RS-232.--

REMARKS

Changes to the title and specification are shown in the attached Appendix A with deletions in brackets and additions underlined.

The specification was objected to because the specification made reference to a U.S. patent application without the serial number and filing date, which were unknown at the time of filing. The specification has been revised to include the serial numbers and filing dates that are now known.

During a telephone conference the Examiner indicated that items A1-A60 and A95-A110 were not considered by the Office action because the Examiner did not receive them. Applicants are resubmitting the references A1-A60 and A95-A110 to the Examiner. No fees are believed due since the references were originally filed with the Patent and Trademark Office prior to the receipt of the first office action, as indicated by the enclosed stamped post cards. The deposit account may be charged, however, if fees are believed due.

Claims 1-3 and 8 stand rejected under 35 U.S.C. §102(e) as being anticipated by Cunningham et al. (U.S. Patent No. 6,124,806). Applicants respectfully traverse this rejection because Cunningham et al. fails to disclose or suggest the claimed "I/O device."

Cunningham et al. purports to disclose a communication device based system to automatically and remotely read meters, such as gas, electric and water meters. To attempt to achieve this objective, a wide-area remote telemetry system 100 includes a plurality of sensor interface modules 102, which are electromechanical interfaces acting as data gathering equipment. The sensor interface modules 102 communicate with data collection modules 110 through hardwire or wireless transmission 108. Specification, Col. 6. ll. 6-19. Fig. 21 shows the general layout of a transmitted

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information signal that follows a packet based data protocol used by communication devices. The packet based signal includes a preamble to distinguish transmitted information from spurious signal or noise, identifier information to identify the specific sensor and other information such as meter type, and an information signal containing data collected by the sensor. See e.g., specification Col. 14, ll. 12-26. Moreover, the communications include only one-way communications, an output from the meter, and does not disclose or suggest an input to the meter.

Conversely, the present invention claims "an I/O device", i.e. an input and output device that uses I/O device signals, e.g., states, to transfer information. For example, a digital I/O device sends on and off states and an analog I/O device sends a state depending on the amperage of the signal sent. The states are used to control relays and read readings for example. As stated in the Background section, using an industry standard communications protocol to communicate from the meter to an external device can create problems in that known standard communications interfaces typically do not provide a way to timestamp the absolute time that the input state was recorded, which is an important feature to various functions of the revenue meter. Even when this capability is provided, there is typically no way to ensure that the absolute time reference of the external device and the revenue meter are the same. In addition, standard communications interfaces are typically bus architectures. Therefore, transferring information from the external device to and from the meter may be delayed by other devices using the bus. Also, known external devices are often complicated to configure. In addition, standard external devices must have dedicated power supplies which means additional wiring must be installed.

Thus, applicants respectfully submit that the rejection over Cunningham et al. be withdrawn since Cunningham et al. does not disclose or suggest an I/O device.

Dependent claims 2 and 3 include all of the limitations of independent claim 1, including additional limitations, and thus this rejection should also be withdrawn. In addition, regarding claim 2, Cunningham et al. does not disclose or suggest a processor to process signals within a second electric circuit, the sensor interface modules 102 of Cunningham et al. merely transmits data. Moreover, regarding claim 3, Cunningham et al. states that the sensor interface modules 102 include "battery power supply and/or a

converter for external power" and therefore does not include the claimed "powered by the revenue meter." See specification col. 7, ll. 42 and 43.

Claims 1 and 8 stand rejected under 35 U.S.C § 102(b) based on Alpha Stars 'National Wireless Communication for Remote Metering' ABB Information System cited in the IDS. Applicants respectfully traverse this rejection since the Alpha Star device does not disclose or suggest the claimed "I/O device."

The Alpha Stars system discusses a two-way wireless data communications capable system, i.e. a packet based communications system like the one discussed above with regard to Cunningham et al. The communications system is based on DataTAC network technology developed by Motorola.

Alpha Stars does not, however, disclose or suggest "an I/O device" which is claimed by the present invention. As discussed above, the claimed I/O device is capable of communicating I/O signals. Thus, applicants respectfully submit that the rejections to claims 1 and 8 over Alpha Stars be withdrawn.

Claims 4 and 5 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cunningham et al. Applicants respectfully traverse this rejection.

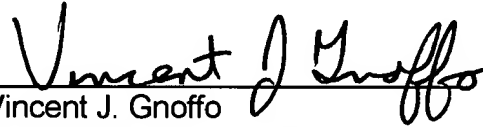
Claims 4 and 5 depend from claim 1 and thus include all of the features of claim 1 and additional features. For the reasons given above with regard to claim 1, Applicants respectfully submit that the rejection of claims 3 and 5 be withdrawn. Moreover, regarding claim 4, the Office action seems to have confused time stamping (i.e., recording the time when an event occurs) with "time-of-use" (i.e. using a different billing rate for power usage during a particular part of the day, week or month). Time-of-use typically involves storing a quantity of energy used in a particular register depending on the time of day, the week or the month. The claimed "timestamping," however, records the time a transition occurs, for example, on a relay or other external device. The timestamping is used so that a user can tell a sequence of events of failure in the power system. For this additional reason, the rejection to claim 4 should be withdrawn.

Claims 6 and 7 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cunningham et al. and further in view of Siemens QUAD4 Plus and MAXsys Meters and IEDS submitted in the IDS. Applicants respectfully traverse this rejection. Claims 6 and 7 depend from claim 1 and thus include all of the features of claim 1 and

additional features. For the reasons given above with regard to claim 1, Applicants respectfully submit that the rejection of claims 6 and 7 be withdrawn.

For all of the above reasons, Applicants respectfully request reconsideration and allowance of the present application. The Examiner is invited to contact the undersigned attorney at the below-listed number if there are any outstanding issues that could be resolved through a telephone conference.

Respectfully submitted,


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